

NORYL GTX™ GTX840 resin

Polyphenylene Ether + PS + Nylon

SABIC Innovative Plastics

Message:

40% glass filled PPE+PA66 blend for automotive under-the-hood and FLEN applications

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Uses	Parts under the hood of a car		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.45	g/cm ³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (220°C/5.0 kg)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow: 3.20mm	0.24 - 0.27	%	Internal method
Transverse flow: 3.20mm	0.60 - 0.63	%	Internal method
Water Absorption			
Equilibrium, 23°C	0.30	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	108		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	13500	MPa	ASTM D638
--	13900	MPa	ISO 527-2/1
Tensile Strength			
Fracture ²	178	MPa	ASTM D638
Fracture	198	MPa	ISO 527-2/5
Tensile Elongation			
Fracture ³	2.0	%	ASTM D638
Fracture	2.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁴	11900	MPa	ASTM D790
-- ⁵	12300	MPa	ISO 178
Flexural Stress			
--	280	MPa	ISO 178
Yield, 50.0mm span ⁶	249	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			

-30°C	11	kJ/m ²	ISO 179/2C
23°C ⁷	11	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	90	J/m	ASTM D256
23°C	94	J/m	ASTM D256
-30°C ⁸	11	kJ/m ²	ISO 180/1A
23°C ⁹	11	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 6.40mm	260	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹⁰	258	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 6.40mm	247	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹¹	244	°C	ISO 75-2/Af
Vicat Softening Temperature	246	°C	ISO 306/B50, ISO 306/B120
Linear thermal expansion coefficient			ASTM E831
Flow: -40 to 40°C	1.6E-5 - 2.0E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	9.0E-5 - 9.4E-5	cm/cm/°C	ASTM E831
Injection	Nominal Value	Unit	
Drying Temperature	93.3 - 107	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.070	%	
Suggested Shot Size	30 - 50	%	
Rear Temperature	277 - 316	°C	
Middle Temperature	282 - 316	°C	
Front Temperature	288 - 316	°C	
Nozzle Temperature	293 - 316	°C	
Processing (Melt) Temp	293 - 316	°C	
Mold Temperature	76.7 - 121	°C	
Back Pressure	0.345 - 1.38	MPa	
Screw Speed	20 - 100	rpm	
Vent Depth	0.013 - 0.038	mm	
Injection instructions			
Minimum Moisture Content: .02 %			
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	1.3 mm/min		
5.	2.0 mm/min		
6.	1.3 mm/min		
7.	80*10*4 sp=62mm		

8.	80*10*4
9.	80*10*4
10.	80*10*4 mm
11.	80*10*4 mm

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